



US Army Corps  
of Engineers  
Seattle District

# SNOQUALMIE RIVER CHANNEL WIDENING PROJECT

SNOQUALMIE FALLS, WASHINGTON



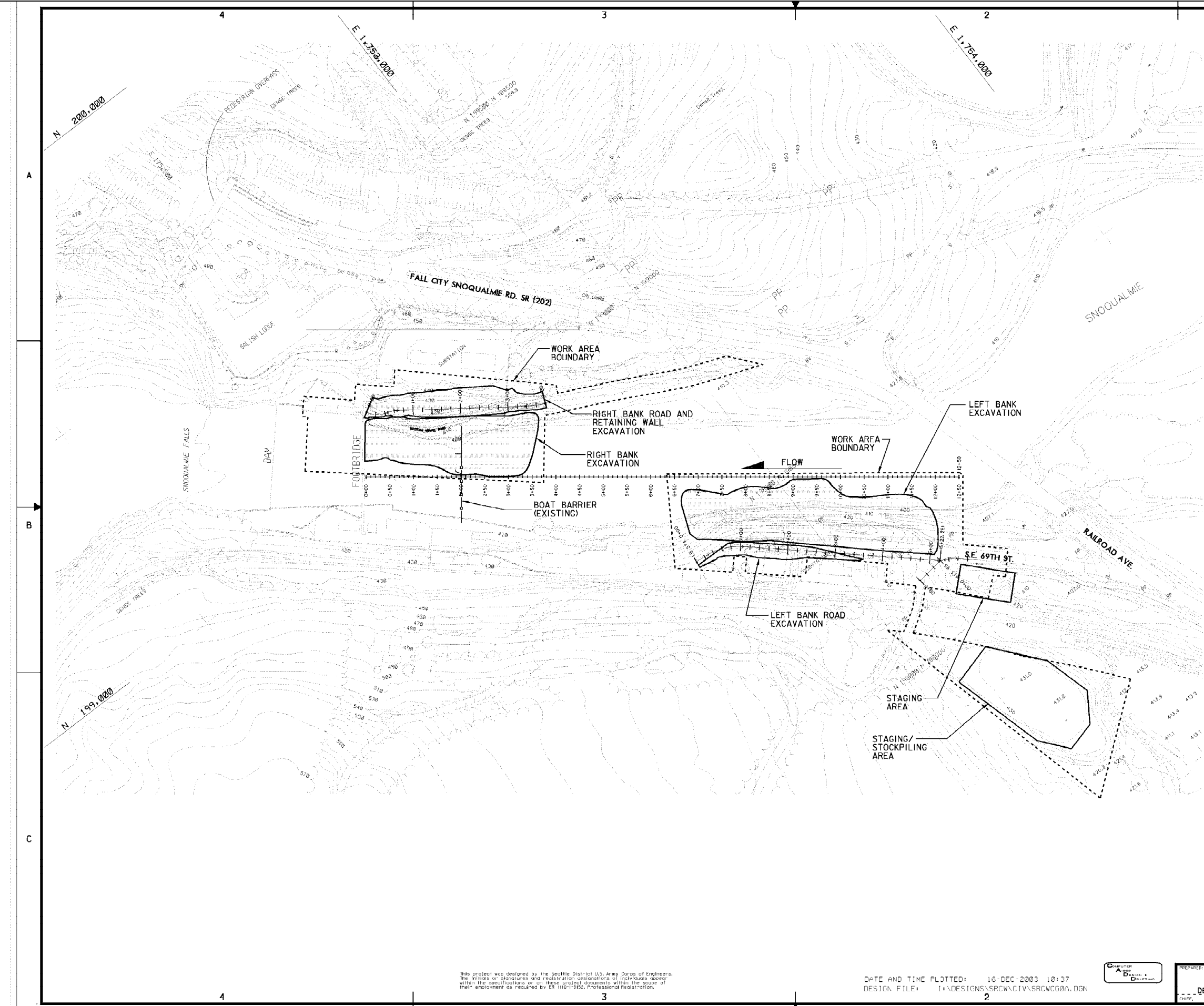
SAFETY PAYS

This project was designed by the Seattle District U.S. Army Corps of Engineers. The initials or signatures and registration designations of individuals appear within this specification, or on, these drawings documents within the scope of their employment as required by ER 110-1-125, Professional Registration.

DATE AND TIME PLOTTED: 16-DEC-2003 08:10  
DESIGN FILE: 1:\DESIGNS\SRW\GENERAL\SRW000A.DGN



PREPARED: DENNIS A. FISCHER, P.E. CHIEF SUBMITTED: TIMOTHY M. SHAW, P.E. PROJECT MANAGER REVIEWED: DEAN M. SCHMIDT CHECKED: "TEST ENGINEERING AND REVIEW" SECTION RECOMMENDED: MARK A. OHLSTROM, P.E. DESIGN APPROVED: RICK L. MOSHIER, P.E. CHECKED: "ENGINEERING & CONSTRUCTION" DIVISION		U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON SNOQUALMIE RIVER CHANNEL WIDENING PROJECT TITLE AND VICINITY MAP SNOQUALMIE FALLS WASHINGTON SIZE: D RFP NO.: W912DW-04-R-0010 FILE NO.: E-2-6-564 DATE: 11DEC03 PLATE: G-1 SHEET: 1 OF 37 OWNER: KAISER ENGINEER: FISCHER	
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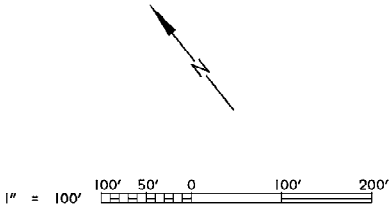


REVISIONS				
SYMBOL	ZONE	DESCRIPTION	DATE	BY

NOTES:  
1. ALL UTILITIES TO BE RELOCATED BY OTHERS, EXCEPT CULVERTS. REFERENCE P.S.E. UTILITY RELOCATION DESIGN. CONTRACTOR SHALL COORDINATE ALL WORK WITH P.S.E. POINT OF CONTACT.

APPROXIMATE EXCAVATION LIMITS

CIVIL ABBREVIATIONS	
ACOE	US ARMY CORPS OF ENGINEERS
BLDG, BUILD	BUILDING
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CMP	CORRUGATED METAL PIPE
E	EAST
EL, ELEV	ELEVATION
EXIST, (E)	EXISTING
FF	FINISH FLOOR ELEVATION
FG	FINISH GRADE
N	NORTH
PCC	PORTLAND CEMENT CONCRETE
R	RADIUS
S	SOUTH
TYP	TYPICAL
TOC	TOP OF CONCRETE
W	WEST



U.S. ARMY ENGINEER DISTRICT, SEATTLE  
CORPS OF ENGINEERS  
SEATTLE, WASHINGTON

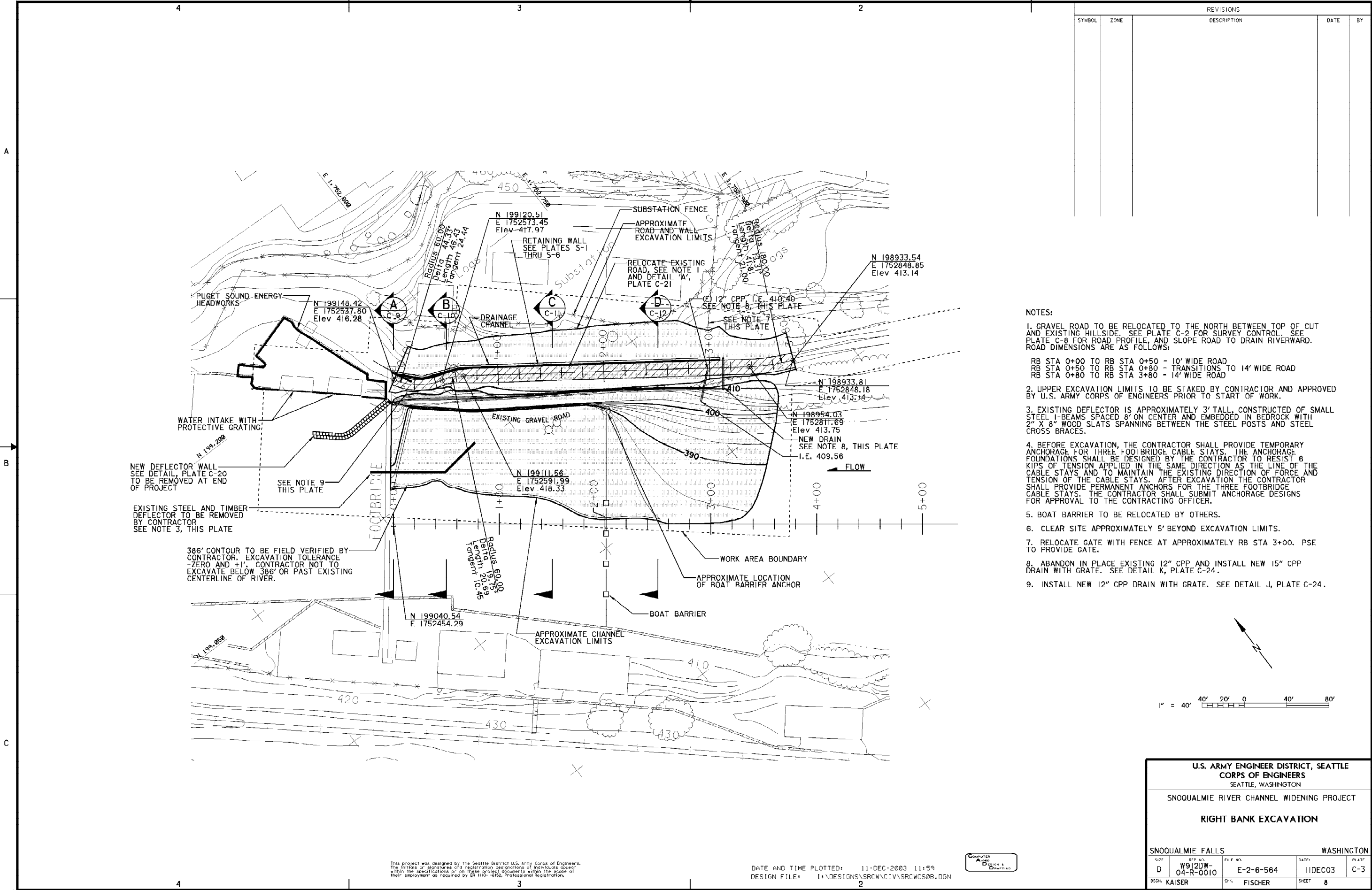
SNOQUALMIE RIVER CHANNEL WIDENING PROJECT

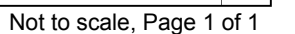
OVERALL SITE PLAN AND  
LIST OF ABBREVIATIONS

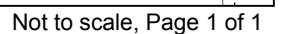
SNOQUALMIE FALLS

WASHINGTON

SIZE: D	RP: W912DW-04-R-0010	FILE NO: E-2-6-564	DATE: 11DEC03	PLATE: C-1
DESIGN: KAISER	CHK: FISCHER	SHEET: 6		





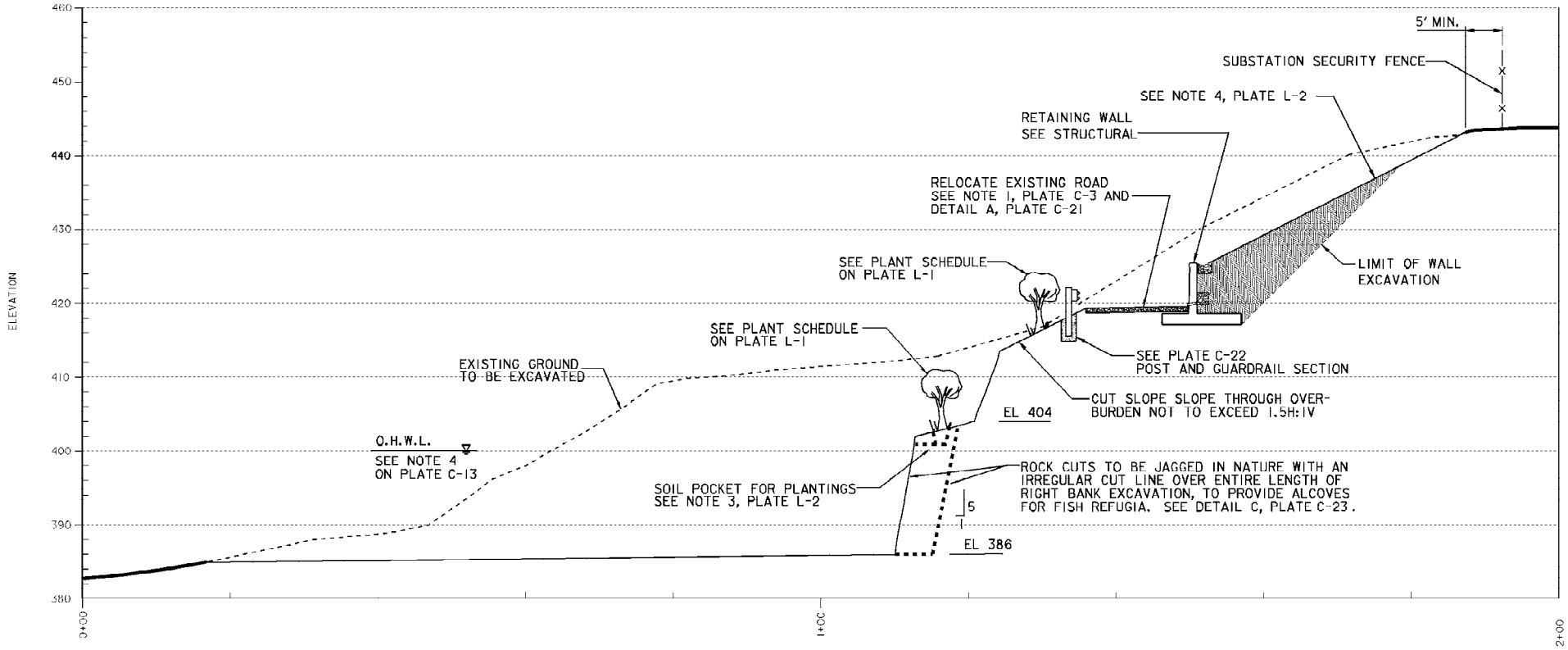


A

B

C

		REVISIONS			
SYMBOL	ZONE	DESCRIPTION	DATE	BY	



STATION 1+50 CROSS SECTION  
VERTICAL AND HORIZONTAL SCALE:  
1" = 10' 10' 5' 0' 10' 20'

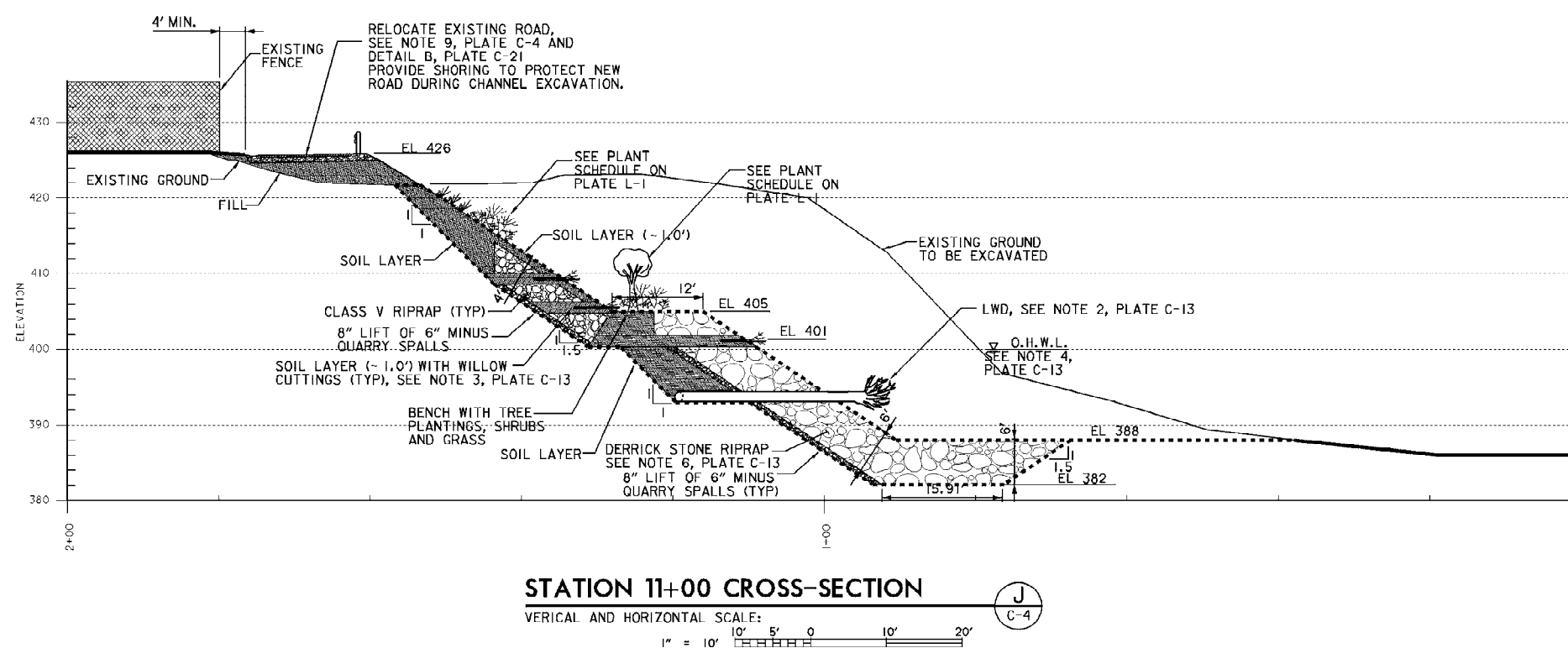
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DATE AND TIME PLOTTED: 11-DEC-2003 12:19  
DESIGN FILE: I:\DESIGNS\SRWC\CIV\SRWC02F.DGN



U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON					
SNOQUALMIE RIVER CHANNEL WIDENING PROJECT					
RIGHT BANK CROSS-SECTIONS 3					
SNOQUALMIE FALLS			WASHINGTON		
SIZE	REP. NO.	FILE NO.	DATE	PLATF.	
D	W912DW-04-R-0010	E-2-6-564	11DEC03	C-11	
DSGN.	KAISER	CHG.	FISCHER	SHEET	16

REVISIONS			
SYMBOL	ZONE	DESCRIPTION	DATE



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DATE AND TIME PLOTTED: 11-DEC-2003 12:19  
DESIGN FILE: I:\DESIGNS\SRWC\CI\SRWC\S0M.DGN



U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON				
SNOQUALMIE RIVER CHANNEL WIDENING PROJECT  LEFT BANK CROSS-SECTIONS 6				
SNOQUALMIE FALLS			WASHINGTON	
DATE D	REF. NO. W912DW-04-R-0010	FILE NO. E-2-6-564	DATE 11DEC03	PROJECT C-
DESIGN KAISER		CHECKED FISCHER	SHEET 23	

A

B

C

SPECIES	COMMON NAME	SIZE	QUANTITY	SPACING	BENCH	RIPRAP	UPPER SLOPE	RIGHT BANK
TREES								
ABIES GRANDIS	GRAND FIR	8-10FT. B&B		10' OC				
ACER MACROPHYLLUM	BIGLEAF MAPLE	2"-3" CAL.		8' OC				
ALNUS RUBRA	RED ALDER	2"-3" CAL.		8' OC				
FRAXINUS LATIFOLIA	OREGON ASH	2"-3" CAL.		8' OC				
PICEA SITCHENSIS	SITKA SPRUCE	8-10FT. B&B		10' OC				
POPULUS TRICHOCARPA	BLACK COTTONWOOD	2"-3" CAL.		8' OC				
PRUNUS EMARGINATA	BITTER CHERRY	2"-3" CAL.		8' OC				
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	8-10FT. B&B		10' OC				
MALUS FUSCA	WESTERN CRABAPPLE	2"-3" CAL.		8' OC				
THUJA PLICATA	WESTERN RED CEDAR	8-10FT. B&B		10' OC				
TSUGA HETEROPHYLLA	WESTERN HEMLOCK	2"-3" CAL.		8' OC				
SHRUBS								
ACER CIRCINATUM	VINE MAPLE	5 GAL.		5' OC				
ALNUS CRISPA	SITKA ALDER	5 GAL.		5' OC				
AMELANCHIER ALNIFOLIA	SERVICEBERRY	2 GAL.		3' OC				
CORNUS STOLONIFERA	RED-OSIER DOGWOOD	5 GAL.		5' OC				
CORYLUS CORNUTUS	WESTERN HAZELNUT	5 GAL.		5' OC				
CRATAGEUS DOUGLASII	BLACK HAWTHORNE	5 GAL.		5' OC				
GAULTHERIA SHALLON	SALAL	2 GAL.		3' OC				
HOLODISCUS DISCOLOR	OCEANSPRAY	2 GAL.		3' OC				
LONICERA INVOLUCRATA	BLACK TWINBERRY	2 GAL.		3' OC				
MAHONIA AQUIFOLIUM	OREGON GRAPE	2 GAL.		3' OC				
MALUS FUSCA	WESTERN CRABAPPLE	5 GAL.		5' OC				
OEMLERIA CERASIFORMIS	INDIAN PLUM	5 GAL.		5' OC				
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	2 GAL.		3' OC				
POLYSTICHUM MUNITUM	SWORD FERN	1 GAL.		18" OC				
RIBES SANGUINEUM	RED FLOWERING CURRANT	2 GAL.		3' OC				
ROSA NUTKANA	NOOTKA ROSE	2 GAL.		3' OC				
ROSA PISOCARPA	BALDHIP ROSE	2 GAL.		3' OC				
RUBUS PARVIFLORUS	THIMBLEBERRY	2 GAL.		3' OC				
RUBUS SPECTABILIS	SALMONBERRY	2 GAL.		3' OC				
SALIX HOOKERIANA	HOOKEER WILLOW	5 GAL.		5' OC				
SALIX LASIANDRA	PACIFIC WILLOW	5 GAL.		5' OC				
SALIX SCOULERIANA	SCOULEER WILLOW	5 GAL.		5' OC				
SALIX SITCHENSIS	SITKA WILLOW	5 GAL.		5' OC				
SAMBUCUS RACEMOSA	RED ELDERBERRY	2 GAL.		3' OC				
SYMPHORICARPOS ALBA	SNOWBERRY	2 GAL.		3' OC				

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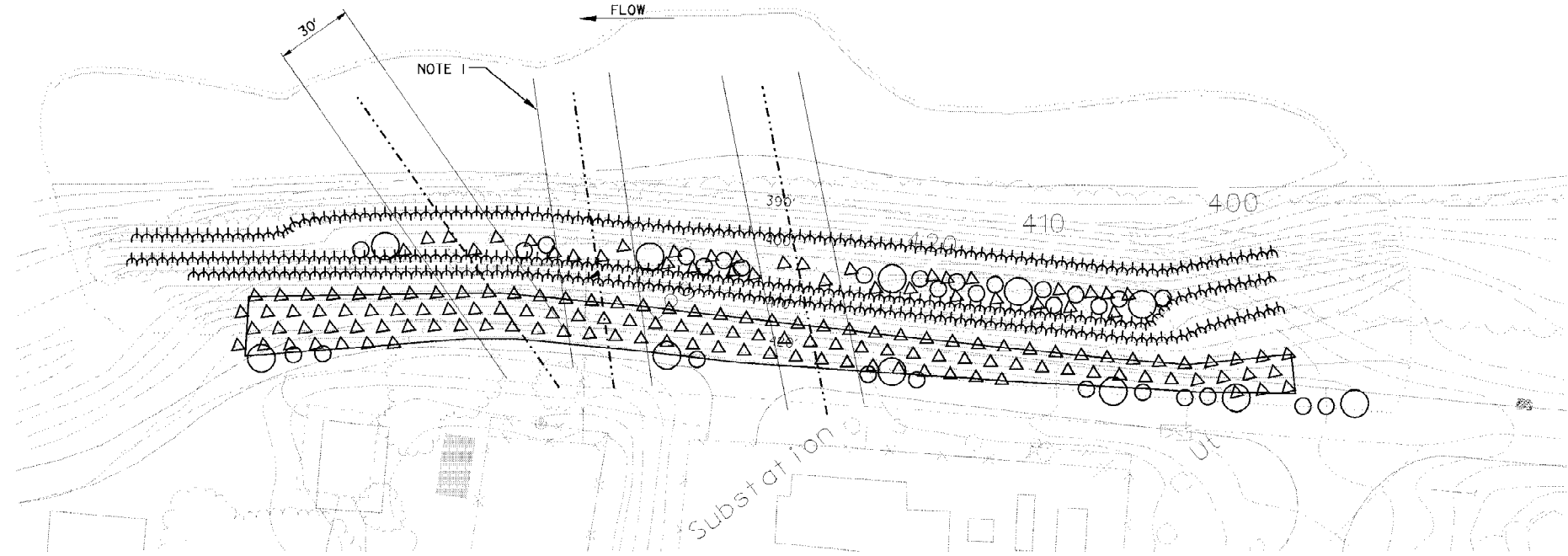
DATE AND TIME PLOTTED: 11-DEC-2003 12:20  
DESIGN FILE: I:\DESIGNS\SRCW\CIV\SRCWCL00.DGN



U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON					
SNOQUALMIE RIVER CHANNEL WIDENING PROJECT					
PLANT SCHEDULE					
SNOQUALMIE FALLS			WASHINGTON		
SIZE D	RFP NO. W912DW-04-R-0010	FILE NO. E-2-6-564	DATE: 11DEC03	PLATE L-1	
DSGN. KAISER	CHG. FISCHER		SHEET 30		



REVISIONS				
SYMBOL	ZONE	DESCRIPTION	DATE	BY



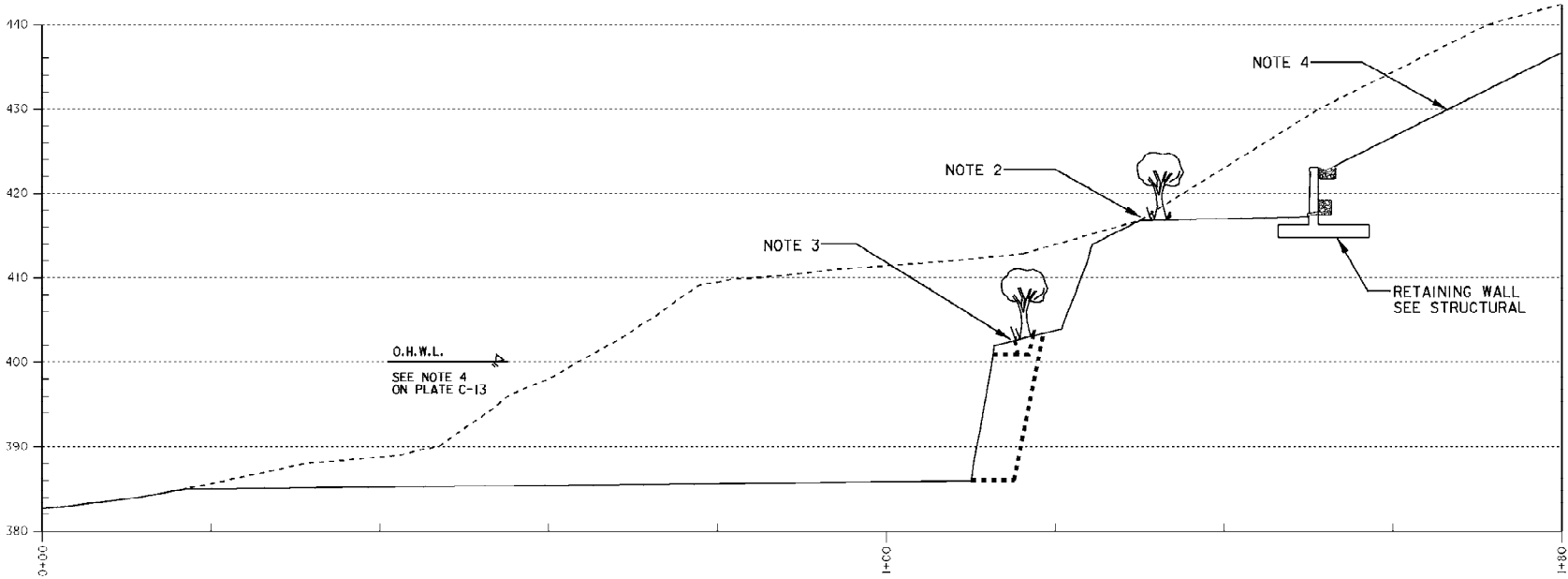
**LEFT BANK PLANTING PLAN**  
NOT TO SCALE

**LEGEND**

- WILLOW SHOOTS ON 3 INCH CENTERS
- SHRUB. SPECIES TO BE USED: OCEANSPRAY, NOOTKA ROSE, SERVICE BERRY, VINE MAPLE
- TREE, 8 FT TALL. SPECIES TO BE USED: RED ALDER, SHORE PINE
- TREE, 20 FT TALL. SPECIES TO BE USED: RED ALDER, SHORE PINE
- OVERHEAD POWERLINE

**NOTES:**

- LEFT BANK: DO NOT PLANT TREES OR CRABAPPLE INSIDE 30' WIDE POWERLINE LOW HEIGHT VEGETATION ZONES.
- RIGHT BANK: A MIXTURE OF 10 TREES AND 40 SHRUBS WILL BE PLANTED ON TOP OF THE BANK OUTSIDE OF THE CREATED SOIL POCKETS WHERE SOIL CONDITIONS ARE THE MOST FAVORABLE TO GROWTH.
- RIGHT BANK: 10 SOIL POCKETS SHALL BE SPACED 20' APART ALONG THE NEW SHORELINE AS SHOWN IN DETAIL D, PLATE C-23. WITHIN EACH SOIL POCKET 2 TREES AND 4 SHRUBS WILL BE PLANTED. TREES ARE TO BE PLANTED ON APPROX. 6 FOOT CENTERS, THE SHRUBS ON APPROXIMATELY 3 FOOT CENTERS. GRADE TO DRAIN RIVERWARD. SOIL SHALL CONSIST OF COMMERCIAL GRADE THREE-WAY MIX.
- ALL DISTURBED OR BACKFILLED AREAS WITH EXPOSED SOIL SHALL BE TOPSOILED AND SEEDED.



**RIGHT BANK PLANTING PLAN**  
NOT TO SCALE

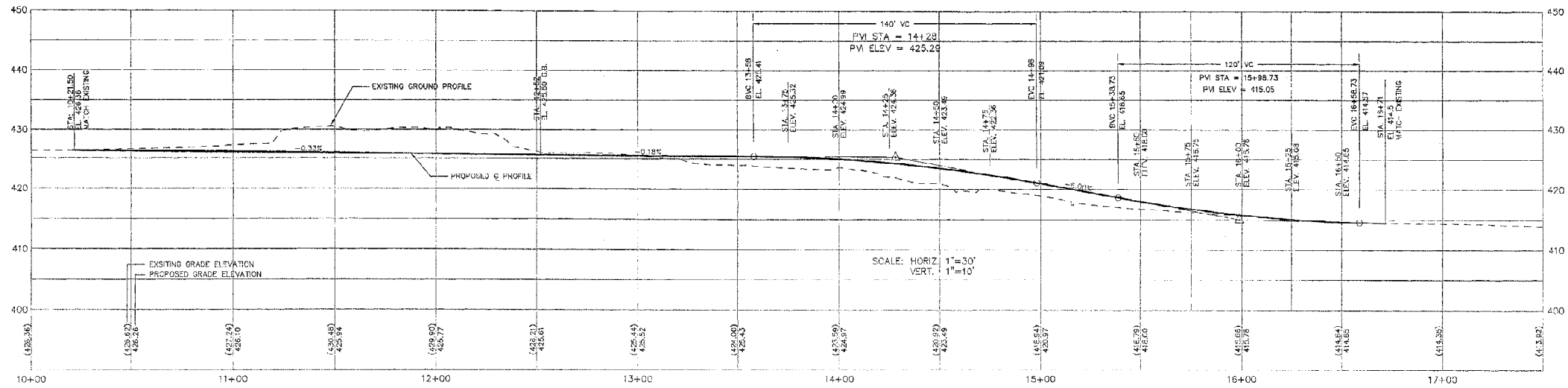
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DATE AND TIME PLOTTED: 16-DEC-2003 08:32  
DESIGN FILE: I:\DESIGNS\SRWC\14\SRWC\08.DGN



U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON				
SNOQUALMIE RIVER CHANNEL WIDENING PROJECT				
PLANTING PLAN				
SNOQUALMIE FALLS			WASHINGTON	
SIZE D	RFP NO. W912DW-04-R-0010	FILE NO. E-2-6-564	DATE 11DEC03	PLATE L-2
DSGN KAISER	CHL FISCHER	SHEET 31		

PORTION OF SEC. 30, TWP 24 N., RNG. 8 E., W.M.



LEGEND

EXISTING FEATURES	
	SIGN POST
	CONIFEROUS TREE
	DECIDUOUS TREE
	HIP RAP
	GAS VALVE
	INVERT (END OF CULVERT)
	CATCH BASIN
	ELECTRICAL JUNCTION BOX
	ELECTRICAL VAULT
	UTILITY POLE
	GUY ANCHOR
	WATER METER
	WATER VALVE
	STAND PIPE
	CREEK OR RIVER
	EDGE OF GRAVEL OR DIRT
	ROCKERY
	FENCE LINE (TYPE AS NOTED)
	GUARD RAIL
	RAIL ROAD
	UNDERGROUND POWER
	STORM DRAIN
	UNDERGROUND TELEPHONE
	UNDERGROUND GAS
	ASPHALT
	CHAIN LINK FENCE
	CONCRETE
	RAIL ROAD
	WATER METER
	WATER VALVE
	SPOT ELEVATION

PROPOSED FEATURES

	STUMP AND TREE TO BE REMOVED
	PUCET SOUND ENERGY
	CORPS OF ENGINEERS
	PSE SILT FENCE
	NEW SECURITY FENCE
	DITCH LINE

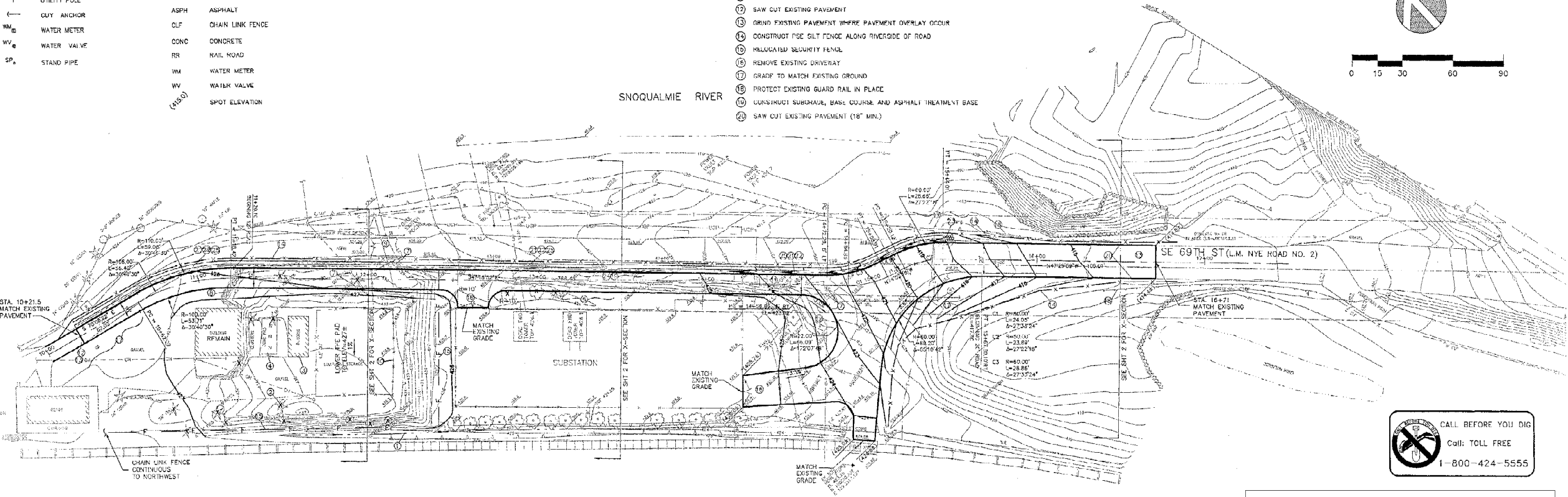
CONSTRUCTION NOTES

PSE RESPONSIBILITY

1. RESHAPE EXISTING DITCH TO DRAIN
2. TREE AND STUMP TO BE REMOVED (TYPICAL)
3. REMOVE EXISTING BUILDING
4. REMOVE EXISTING CONC PAD
5. GRAVEL SHOULDER, YAW CURVE OF 4" DEPTH, 4" MIN. WIDTH SURROUNDING EXISTING FENCE, EXCEPT DRIVEWAY
6. EXISTING PIPE TO BE ABANDONED IN PLACE
7. REMOVE AND RELOCATE EXISTING UTILITY POLE AND GUY ANCHOR (TYPICAL)
8. REMOVE EXISTING ROCKERY
9. REMOVE EXISTING GATE AND ITS ACCESSORIES PRIOR TO CONSTRUCTION AND REPLACE AFTER CONSTRUCTION AT A LOCATION DIRECTED BY PSE
10. REMOVE EXISTING CHAIN LINK FENCE
11. RELOCATE POWER VAULT
12. SAW CUT EXISTING PAVEMENT
13. GRIND EXISTING PAVEMENT WHERE PAVEMENT OVERLAY OCCUR
14. CONSTRUCT PSE SILT FENCE ALONG RIVERBANK OF ROAD
15. RELOCATED SECURITY FENCE
16. REMOVE EXISTING DRIVEWAY
17. GRADE TO MATCH EXISTING GROUND
18. PROTECT EXISTING GUARD RAIL IN PLACE
19. CONSTRUCT SUBGRADE, BASE COURSE AND ASPHALT TREATMENT BASE
20. SAW CUT EXISTING PAVEMENT (18" MIN.)

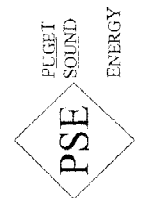
COF RESPONSIBILITY

21. CONSTRUCT 2' WIDE GRAVEL SHOULDER
22. CONSTRUCT GUARD RAIL ALONG GRAVEL SHOULDER NEXT TO 3:1 SLOPE
23. CONSTRUCT RIP-RAP (1' DEEP AND 6' LONG W/ 4" MIN. CRUSH ROCK)
24. CONSTRUCT FINAL LIFT OF ASPHALT PAVEMENT
25. CONSTRUCT 2' WIDE X 0.5' DEEP GRASS LINED DITCH



REFERENCE DRAWING NO. 9

PUCET SOUND ENERGY  
SNOQUALMIE SUBSTATION  
ACCESS ROAD  
KING COUNTY  
WASHINGTON



DAVID EVANS  
AND ASSOCIATES, INC.  
415-118th Avenue SE  
Burien, WA 98148  
Phone: 425-319-6800



REVISIONS: APPD.

DATE: NOVEMBER 11, 2003  
DESIGN: PCT  
DRAWN: PCT  
CHECKED: HLT  
REVISION NUMBER:

SCALE: 1"=30'

PROJECT NUMBER:  
PSEN0000-0023

DRAWING FILE:  
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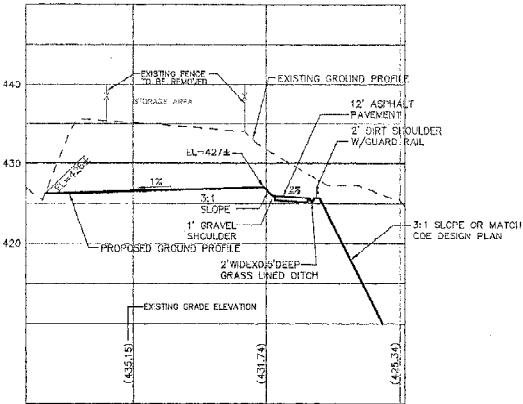
SHEET NO.

1

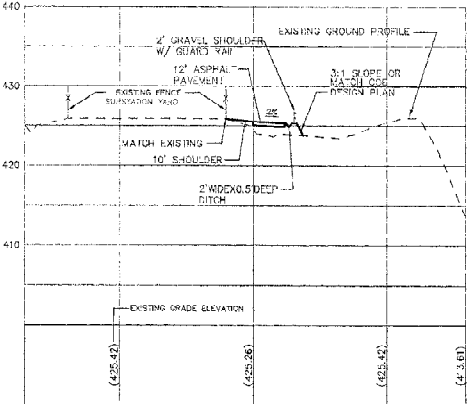
OF 2

FILE NO. E-2-6-564

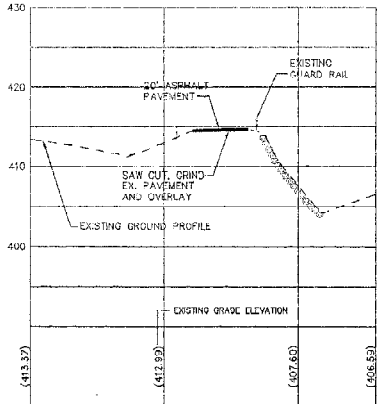
PORTION OF SEC. 30, TWP 24 N., RNG. 8 E., W.M.



CROSS-SECTION AT STA 12+00  
SCALE: HORIZ. 1"=30'  
VERT. 1"=10'



CROSS-SECTION AT STA 13+50  
SCALE: HORIZ. 1"=30'  
VERT. 1"=10'



CROSS-SECTION AT STA 16+50  
SCALE: HORIZ. 1"=30'  
VERT. 1"=10'

3" ASPHALT CLASS B BY COE  
3" ASPHALT TREATED BASE BY PSE

9" GRAVEL BASE COURSE BY PSE

WSDOT SPEC 9-03.9(3) FOR BASE COURSE AND COMPACTED TO 95% MAXIMUM DRY DENSITY PER ASTM D1557(LATEST)

PAVEMENT DETAIL N.T.S.

COMPACTED SUBGRADE AND PROOF ROLLED BY PSE

GENERAL NOTES

1. ALL WORKS AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT APWA AND WSDOT STANDARDS AND SPECIFICATIONS.
2. WHERE THE DRIVEWAY IS TO RECEIVE OVERLAY, THE EXISTING PAVEMENT MUST BE COLD PLACED AT THE EDGE.
3. CLEARING AND GRUBBING AND REMOVE ALL UNSUITABLE SOILS UNDER THE PROPOSED DRIVEWAY.
4. THE ESC CONTROLS SHOWN ON THIS PLAN ARE THE MINIMUM FOR ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION PERIOD, THESE ESC CONTROLS SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONAL ESC CONTROLS MAY BE REQUIRED TO ENSURE COMPLETE EROSION CONTROL.
5. ALL EXPOSED SOIL SHALL BE COVERED WITHIN 5 DAYS OF EXPOSURE DURING DRY SEASON (APRIL 1 THROUGH SEPTEMBER 30), AND WITHIN 48 HOURS OF EXPOSURE DURING THE WET SEASON (OCTOBER 1 THROUGH MARCH 31) USING PLASTIC, MULCHING OR SEEDING.

PUGET SOUND ENERGY  
SNOQUALMIE SUBSTATION  
SECTIONS AND DETAILS  
KING COUNTY  
WASHINGTON



DAVID EVANS  
AND ASSOCIATES INC.  
415 - 18th Avenue SE  
Bellevue Washington 98005-3518  
Phone 425.516.6500



REVISIONS: APPD.

DATE: NOVEMBER 11, 2003  
DESIGN: PCT  
DRAWN: PCT  
CHECKED: *MLP*  
REVISION NUMBER:

SCALE: N/A

PROJECT NUMBER:  
PSEN0000-0023

DRAWING FILE:  
PSEN0023\_00\_00.DWG

SHEET NO.

2

OF 2

REFERENCE DRAWING NO. 10

FILE NO. E-2-6-564

